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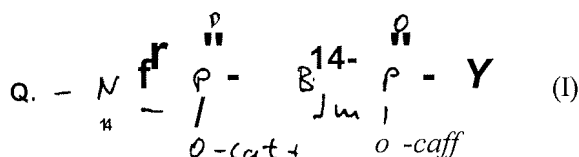
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(54) Title: NEW CLASS OF GAMMA DELTA T CELLS ACTIVATORS AND USE THEREOF



(57) Abstract: The present invention relates to a new class of compounds having  $\gamma\delta$  T cells activating properties of Formula (I), a composition comprising these compounds and methods for regulating an immune response in a subject comprising the step of administering these compounds.

## INTERNATIONAL SEARCH REPORT

 Intern: 31 Application No  
 PCT/IB2004/004311

## A. CLASSIFICATION OF SUBJECT MATTER

 IPC 7 C07F9/06 A61K31/66 A61K39/39 A61P35/00 A61P31/00  
 A61P37/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal , CHEM ABS Data, BEILSTEIN Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category "	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&amp;" document member of the same patent family

Date of the actual completion of the international search

30 May 2005

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## INTERNATIONAL SEARCH REPORT

Intern      if Application No  
PCT/IB2004/004311

(^Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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 Intern: I Application No  
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Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	DATABASE CA Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; KIM, SANG HUN ET AL: "Photobinding of ' .gamma. -32P! ATP .gamma. -benzophenone to the surface of a polyurethane membrane in the preparation of a .beta. -particle-emitting balloon catheter" XP002329676 retrieved from STN Database accession no. 1999:646526 abstract & JOURNAL OF BIOMEDICAL MATERIALS RESEARCH , 48(5), 669-674 CODEN: JBMRBG; ISSN: 0021-9304, 1999, ----- -/-	1

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 Intern: Application No  
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C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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 Intern I Application No  
 PCT/IB2004/004311

C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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## INTERNATIONAL SEARCH REPORT

Intern Application No  
PCT/IB2004/004311

C(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>&amp; JOURNAL OF BIOLOGICAL CHEMISTRY , 277(19) , 16624-16631 CODEN: JBCHA3; ISSN: 0021-9258, 2002,</p> <p>-----</p> <p>wo 97/21452 A2 (ADVANCED MAGNETICS, INC. , USA) 19 June 1997 (1997-06-19) claims 1-4, 16-19 &amp; DATABASE CA 'Onl ine! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; JOSEPHSON, LEE ET AL: "Macromolecular prodrugs of nucleotide analogs" retrieved from STN Database accession no. 1997:511689 abstract</p> <p>-----</p>	1,9, 11, 12
X	<p>DATABASE BEILSTEIN 'Onl ine! BEILSTEIN INSTITUTE FOR ORGANIC CHEMISTRY, FRANKFURT-MAIN, DE; 31 December 1990 (1990-12-31 ) , XP002329874 Database accession no. BRN 4287288 abstract &amp; SATO ET AL. : CHEM. PHARM. BULL. , vol . 38, no. 8, 1990 , pages 2287-2289,</p> <p>-----</p>	1
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A	<p>ZWIERZAK A: SYNTHESIS , vol . 11, 1982 , pages 920-922, XP001206357 reaction 3 —&gt; 5 page 920, column 2 - page 921, column 1; table 1</p>	15, 17
A	<p>&amp; DATABASE BEILSTEIN 'Onl ine ! BEILSTEIN INSTITUTE FOR ORGANIC CHEMISTRY, FRANKFURT-MAIN, DE; 27 June 1988 (1988-06-27) , XP002329876 Database accession no. REACTION I.D: 1606659 abstract</p> <p>-----</p>	15, 17

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2004/004311

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-17, 19-20

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.



FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17,19-20

gamma, delta T cell activator, preparation and use  
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2. claim: 18

method for preparing  
(E)-2-(4-azido-2-methyl but-2-enyl oxy)tetrahydro-2H-pyran  
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3. claims: 21, 22

activated gamma delta T-cell and use  
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## INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern. Application No

PCT/IB2004/004311

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